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ABSTRACT

The reliance of teacher education programs on social science research as a knowledge base is inadequate to meet the full demands of the teaching profession. While courses in the educational social sciences such as human development, learning theory, and child psychology are to some extent valuable, this training does little to prepare teachers for the day-to-day demands of teaching. The nature of educational practice points to the need for a different body of knowledge to inform teaching practice, one that would accompany, and, in some ways, supplant that provided by social science. This body of knowledge should be drawn from experiences and skills closely tied to the actual demands of teaching and largely influenced by practice in the classroom. This new body of professional knowledge can be developed by increasing opportunities for teachers to analyze practice and to share knowledge with their colleagues. Innovations in teacher education programs should include more practitioners teaching in the university setting, more collaborative research in the classroom, and opportunities for sabbaticals for teachers so they may develop and reflect upon their practice. (JD)

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THE LIMITATIONS OF SOCIAL SCIENCE: TOWARD A PROFESSIONAL BODY OF KNOWLEDGE

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THE LIMITATIONS OF SOCIAL SCIENCE: TOWARD A PROFESSIONAL BODY OF KNOWLEDGE

Knowing the source and composition of the knowledge that best informs practice is vital for any profession. For as many observers of the professions have noted, it is upon an authoritative and specialized body of knowledge that quality, competence, and professional status rest (Cogan, 1953; Friedson, 1970; Glazer, 1974). Throughout the 20th century, thinking about improving the practice of teaching has translated primarily into thinking about improving the body of social science knowledge used in most teacher training and education programs[1] (Gage, 1978; Travers, 1973). Indeed, the notion of drawing upon social science knowledge is so pervasive that other sources of knowledge or means of improving practice are seldom recognized. In particular, few of our images of professional teaching are influenced by its practitioners, and very little of what is considered professional knowledge is drawn from the work of teaching.

To a large extent, this stems from a 20th century view of teaching as bound by tradition and myth and in need of updating and reform. Central to this view is the assumption that to be competent, the practice of teaching needs a scientific base -- that is, that the development of theoretical and empirical knowledge and scientific analysis can improve teaching. This view implies that persons trained largely outside the teaching profession -- namely social scientists -- are best

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[1] The overwhelming reliance upon the social sciences in education is shown by their impact upon both our ideas and our institutions; faculty in university departments of education are increasingly drawn from social science disciplines; attempts to improve teacher training are often framed in terms of expanded university study; and efforts to develop new knowledge focus on research done in universities or research and policy centers such as the National Institute of Education.

able to develop and provide this knowledge. A recent book on teaching reports that:

> . . . the activities of teaching are reasonable, natural, rational events. They have discoverable causes and effects. Though conducted by human beings who have unique perspectives and aspirations for them, the activities of teaching have an observable, existential reality that is not divergent from any other set of observable events. Further, it is not only possible to conduct research on the activities of teaching, but considerable research effort has taken place in the past few decades. And while this research is complex, as is teaching, it has already developed both concepts and findings. Although not yet sufficient to construct an empirically based science of teaching, these findings are already sufficient to provide useful information for educators.
> (Duncan & Biddle, 1974, p. 12)

By and large, this knowledge and its transfer can be seen as flowing in one direction: from social scientist to teacher or teacher-intern. Few have asked whether teaching could be advanced as much by its own internal cultivation as from the outside. Prevailing opinion holds that the knowledge needed is almost solely social science knowledge, obtained mainly outside the world of teaching and then passed on to its practitioners.

Social Science as a Knowledge Base

Despite the popularity of this view, there is evidence of increasing concern in the last two decades that the knowledge social science affords for the practice of teaching is far from complete. This seems to be accepted by both those within the profession and social scientists themselves. For example, Lortie (1975) found that while most teachers he interviewed reported that courses in the educational social sciences, such as human development, learning theory, and child psychology, were "somewhat helpful," they also reported that their education and train-

ing did little to prepare them for the day-to-day demands of teaching. Other self-reports by teachers mention that lack of preparation leads to feelings of inadequacy in the classroom and is a source of professional dissatisfaction (Sarason, 1962).

Social scientists too have come to recognize their limitations in providing an adequate knowledge base for teaching practice. In many respects we know little more about the teacher's art than did William James or John Dewey. One group of social scientists writes:

> The simple fact of the matter is that after 40 years of research on teacher effectiveness during which a vast number of studies have been carried out, one can point only to a few outcomes that a superintendent of schools can safely employ in hiring a teacher or granting him tenure.
>
> (Barr et al., 1953, p. 657)

A more contemporary review of the literature on the role of social science in educational practice concluded in a similar fashion:

> Our general conclusion, so far, is that there are few consistent, positive, policy-relevant findings. That is, the research offers little guidance to what educational practices should be implemented.
>
> (Averch et al., 1972, p. 155)

What is surprising, given these concerns, is the continuing dominance of the belief that social science knowledge can best inform teaching practice. Educational spokesmen and university professors have become more cautious in their claims but few have given up hope. Few see a more limited role for social science and an increased reliance upon other sorts of knowledge or professional training. The inadequacy of findings is explained in various ways: we don't know the right questions to ask; our statistical tools and methodological framework are weak; current theories of instruction and learning are not good enough to guide research; the data are inadequate; we are not able to

translate what we know into educational practice. But the power of social science to improve teaching practice is rarely questioned. Instead, the solution proposed is frequently more and better social science research.

Social Science Reconsidered

Our view is somewhat different. We think that social science as the basis for informing the practice of teaching has more fundamental limitations than are typically recognized. One of them is that social science research tends to deal with areas removed from the demands of teaching practice. Educational social scientists have taken their lead largely from the academic disciplines and not from the actual problems, issues, and concerns of teaching. The educational sociologist, for example, is concerned with the social maintenance function of teaching; the educational psychologist analyzes teaching practice in terms of its impact upon the cognitive development of the child; and the educational economist views teaching practice as an investment in human capital resulting in increased lifetime productivity and income for the student. This disjuncture is further evidenced by notions and images that flourish in the sciences but do not exist in the world of practice. For example, economists use such terms as "maximization," "efficiency," and "output"; sociologists are concerned with "power" and "modes of interaction"; and psychologists talk of "behaviorism" and "free will" -- all of which reflect the disciplines they come from more than the teacher's reality.

We do not wish to suggest that social science analysis has failed to further our understanding of teaching and schooling. But its potential usefulness for teaching practice is limited, for it ignores so much

of the teaching process and the concerns of practitioners. Research on teaching has produced little that helps teachers deal with parents or school discipline, scheduling a day's activities, or the more subtle aspects of the teacher's art.

The rigors of "scientific" research further limit the fit between social science knowledge and the demands of practice. Regard for experimental design, reliability, measurability, and statistical significance has taken precedence in determining what should constitute the profession's knowledge base. In effect, educational research attends more to rigorous scientific methodology than to educational practice. Teaching practice is seldom studied in the classroom, where the multitude of variables introduces too much complexity. Educational psychologists more often turn to experimentation in a laboratory situation and confine their study to what can be controlled and measured. However, as we are coming to recognize, findings from a controlled experimental study may have limited application to the complex interactive classroom environment. Moreover, such studies ignore potential knowledge drawn from the intuition, experience, and judgment of teachers, or at best do not give it the attention it deserves.

Practice as Knowledge

These limitations of social science cannot easily be overcome, since they are directly related to the way in which knowledge for teaching has been viewed. Too much faith has been placed in the belief that social scientists and the methods of science -- rather than practitioners and the world of practice -- can make the major contribution to knowledge for teaching. Educational social scientists and social science knowledge have an important place in educating teachers, but far

more attention needs to be given to creating a significant interchange between educational research and the realities of practice.

In medicine, for example, this interchange is much more highly developed than in teaching.[2] The knowledge base for the development of medical tools, such as drugs, relies heavily on the physical and biological sciences. However, after such a tool is developed in the laboratory, it is field tested with human subjects to determine its capabilities and potential side effects. It is on these tests that dosage and other qualifications regarding the drug's use are based. Furthermore, if the drug is approved and released for general sale, there will continue to be studies on its long-term effects and potential side effects. And a doctor who detects an irregularity when administering a particular drug will document his findings and share them with his colleagues. Thus research findings are constantly butting up against the findings of practice, in effect establishing a feedback loop from practice to research and vica versa. Ultimately, the knowledge drawn from practice becomes an important part of the professional knowledge base for future research. Unless education follows a similar path -- using knowledge that grows out of social science as well as out of the concerns and problems of teaching, and establishing a continuing dialogue between educational researcher and practitioner -- it is our belief that the social sciences will be unable to contribute strongly to the professional knowledge base of teachers.

Teaching, like medicine, may draw upon the findings of science,

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[2] We draw upon the medical profession throughout this paper because of its success and wide acceptance as a profession. In fact, a review of the literature on the profession suggests that sociologists have defined "profession" in terms of the medical model.

but this alone is not sufficient for competent practice. As Ryle says of medical practice:

> A man (sic) knowing little or nothing of medical science could not be a good surgeon but excellence at surgery is not the same thing as knowledge of medical science; nor is it a simple product of it. (Ryle, 1949, p. 49)

This observation seems particularly valid for teaching because the scientific knowledge base for teaching, unlike that for medicine, includes few immutable laws and principles. Body chemistry is much easier to measure and predict than is human behavior.

The nature of educational practice, in effect, points to the need for a different body of knowledge to inform teaching practice, one that would accompany and in some ways supplant that provided by social science. It should draw on experiences and skills closely tied to the actual demands of teaching and largely influenced by the world of practice. Attention needs to be given to developing the "knowing how" component of teaching, yet without prescribing individual action or merely providing a bag of pedagogical tricks. We envision this to be clinical knowledge capable of buttressing the teacher's art, much like clinical knowledge in the medical profession. Quite generally, clinical knowledge is that which can be used by the practitioner; it might include scientific findings, but also anecdotal accounts, traditional practices, and experimental insight. For instance, in medical practice diagnosis can draw upon the research findings of the biological sciences, the collected knowledge of the profession gleaned from years of practice, accounts given by other doctors concerning similar symptoms, and the experience of the individual doctor with similar cases (Hughes, 1978; Becker, 1960; Mumford, 1974).

In encouraging the development of this new body of knowledge, we are proposing not that the social sciences be impugned, but rather that their usefulness for the classroom be improved. We are proposing an "interactive" body of knowledge, blending social science findings with clinical classroom experience. This knowledge base may include ways to deal with discipline problems in class in conjunction with social science theories on causes of student misbehavior. And it should include areas of practice that have not been addressed by social scientists -- for example, how to deal with parents. Thus these two strains of knowledge -- that from the world of practice and that from the social sciences -- would ideally form a more professional body of knowledge.

New Structures for Developing and Transferring a Professional Body of Knowledge

How is this new body of professional knowledge to be developed? In our view, this depends in large part on increased opportunities for teachers themselves to reflect upon and analyze their practice and to share this knowledge with their classroom and university colleagues. Currently, once teachers have completed their initial training, they rarely have the chance to think seriously about their practice or the experience of their colleagues, or to sort out the knowledge required for and actually used in practice. Quite often, if a teacher survives the first year, this is interpreted to mean that he or she is on the way to becoming a good teacher; thus the notion of not drowning is confused with that of being a good swimmer.

The opportunities teachers do have for formally sharing insight gained from experience usually come in the form of workshops and in-service training. But these tend to be tailored to new regulations (e.g., career education or individual instruction); and they are often

inspired or conducted by social scientists rather than educators. Even students training to become teachers are typically not taught by those actually practicing, and their contact with teaching consists mainly of brief exposure to classrooms in the role of observers and aides. This, once again, does not offer much opportunity to understand the problems of teaching and learn the skills and procedures for dealing with classroom demands.

In conclusion, we propose that the teaching and educational establishment seek ways in which a more "professional" body of knowledge might be ascertained and developed. What is striking about the teaching profession is the lack of institutional arrangements that allow for the cross-pollination between research and practice. In medicine, for example, university training is closely tied to the practice of medicine in hospitals; the profession of teaching has no comparable institutional arrangements for a close relationship between research and practice.

It is our view that there are several promising alternatives to the status quo which may allow for this development. These alternatives include: more practitioners teaching in university settings, teacher centers (where teachers may collaborate and share in the clinical knowledge of practice), institutes for teacher education (where teachers may take a sabbatical to develop and reflect upon their practice), more collaborative research in the classroom (where teacher and university faculty may conduct research jointly), and more opportunities, union sponsored and supported by school systems, for teachers to share their knowledge of practice. It is our view that unless the profession moves in these directions to develop a more adequate knowledge base, improvements in professional education and practice will remain modest.

References

Averch, H., et al. How effective is schooling? A critical review and synthesis of research findings. Final report to the President's Commission on School Finance. Rand Corporation, President's Commission on School Finance, Washington, 1972.

Becker, H. The fate of idealism in medical school students. American Sociological Review, 1950, 23, 50-56.

Barr, et al. Second report of the committee on criteria of teacher effectiveness. Journal of Educational Research, May 1953, 641-658.

Cogan, M. Toward a definition of a profession. Harvard Educational Review, 1963, 23, 37-50.

Dunkin, M., & Biddle, B. The study of teaching. New York: Holt, Rinehart, & Winston, 1974.

Freidson, E. Profession of medicine. New York: Dodd, Mead and Company, 1974.

Gage, N. The scientific basis of the art of teaching. New York: Teachers College Press, 1978.

Glazer, N. The schools of the minor professions. Minerva, July 1979, 346-364.

Hughes E. The social significance of professionalization. In H. Vollmer & D. Mills (Eds.), Professionalization. New Jersey: Prentice Hall, 1966.

Lortie, D. School teacher: a sociological study. Chicago: University of Chicago Press, 1975.

Mumford, E. Interns: students to physicians. Cambridge: Harvard University Press, 1970.

Ryle, G. The concept of mind. London: Barnes & Noble, 1949.

Sarason, S. The preparation of teachers: an unstudied problem. New York: Wiley Press, 1962.

Travers, R. (Ed.). Second handbook of research on teaching. Chicago: Rand McNally, 1973.